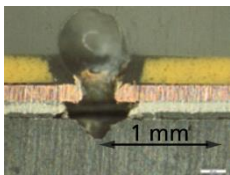
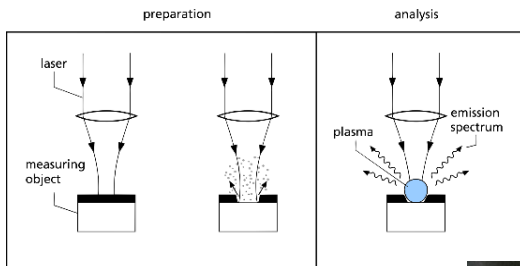


# 06 – CHEMICAL ANALYSES OF ELECTRONIC COMPONENTS

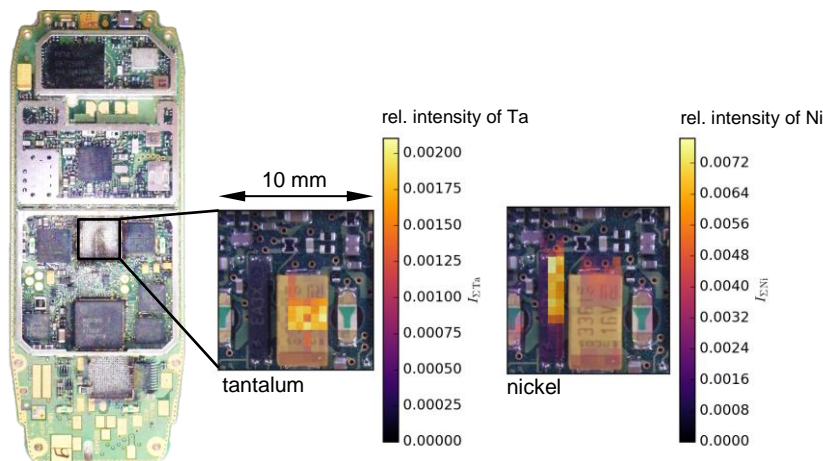


## LASER-INDUCED BREAKDOWN SPECTROSCOPY – LIBS



- local removal of housing with laser ablation
- material excitation for optical emission spectroscopy (LIBS)
- fast multi-element identification of tantalum, gold, silver, copper, tungsten

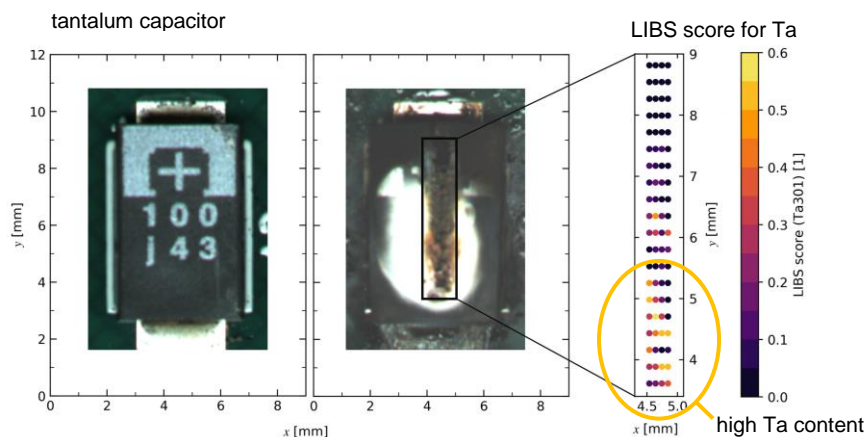
## ELEMENT MAPPING



PCB of mobile phone

- locally resolved chemical analysis
- tantalum signal from core of Ta capacitor
- nickel signal from inductor

## CLASSIFICATION BY LIBS SCORES



- calculation of LIBS scores as dimensionless indicator for the content of valuable elements
- classification of components to defined sorting fractions for recycling